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ABSTRACT

It is suggested in this paper that practical arguments can be used in teacher education and staff development programs to introduce teachers to research-based practices. Practical arguments consist of three types of premises--value, empirical, and situational--that conclude with an action, or an intention to act. Such arguments are a useful way to think about the ways teachers can use research results as evidence, as information, and as sources of insight for them to consider along with their own experiences. A staff development process based on practical argument elicitation can help a teacher bring together, organize, and analyze a set of premises that provide rationale for an action, and examine them in relation to research. An example is given of the use of practical arguments in changing beliefs and practices. A description is presented of a teacher education model currently being developed as part of the Reading Instruction Study that will use belief interviews, videotaping, group practical argument elicitation, and current research discussions to change teaching practices. The purpose of this model program is to provide teachers with a way of examining their practice in relation to their classroom goals and also to explore their premises about reading, students, and teaching. (JD)

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A Study of Teachers' Research-Based Instruction of Reading Comprehension

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The Use of Practical Arguments in Staff Development[1] [2]

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The Use of Practical Arguments in Staff Development[1]

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Introduction

The purpose of this paper is to describe a way to introduce research on teaching and learning to teachers through the use of practical arguments. As described by one of us (Fenstermacher, 1978, 1986, 1987), a practical argument consists of three types of premises--value, empirical and situational--that conclude with an action, or an intention to act. Practical arguments are a useful way to think about the ways teachers can use research results, as evidence, as information, as sources of insight for teachers to consider along with their own experiences. It is suggested in this paper that practical arguments can be used in teacher education and staff development programs designed to introduce teachers to research-based practices.

Teachers and Research

There is a troubled relationship between producers and users of research. While a significant body of research on teaching in general, as well as the teaching of reading, writing, mathematics and science has been developed over the last 15 years (see, for example, Richardson-Koehler, 1987a), the teaching profession seems scornful of research and its possibilities for use in practice (Florio-Ruane & Dohanich, 1984; Waxman, et al., 1986). Nor does research appear to be an element in teachers' discourse as they plan as a group for change (Hargreaves, 1984). Two reasons could help to explain this situation:

1. The questions asked of teachers concerning the use of research may not be appropriate. Teachers do not <u>use</u> research--they engage in practices. These practices come from a variety of sources which may or may not include an empirical research base.

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2. The adoption of a research-based practice involves a transformation process. We doubt that practices are adopted wholesale; rather, practices are molded, adapted and adjusted to fit teachers' perceived reality. In this process, the teachers begin to own the practice, and its origin becomes blurred. Thus, a teacher education program designed to introduce teachers to new research-based practices must work from a base of teachers' beliefs and theories about students, teaching and the subject matter.

Teachers' Beliefs and Practical Argument

The small but expanding literature on teachers' conceptions and theories of practice leads one to conclude that ignoring teachers' beliefs in implementing change often leads to disappointing results. Teachers adapt or adopt new practices in their classrooms if their beliefs match the assumptions inherent in the new programs or methods (see, for example, Hollingsworth, 1987, and Munby, 1984). Thus, understanding teachers' beliefs is crucial to the development and implementation of new programs and effective inservice education.

Recent work on how teachers and professionals think-in-action helps to explain how teachers' implicit theories affect behavior, and how these beliefs and theories can be modified to accept new and different research based practices. Schon's (1983) work on reflective practice, for example, suggests that practitioners' knowledge-in-action is intuitive, tacit, and based on the experiences of trial and error. Elbaz (1983) suggests that teachers hold three forms of practical knowledge (rules of practice, practical principles, and images), and these are used in different ways in practice. And Connelly and Clandinin (1985) feel that any teaching act is a reflection of all the modes of knowing--aesthetic, scientific, formal, interpersonal, intellectual, intuitive and spiritual.

Of most use to us in considering a staff development program designed to promote research-based practices is the conception of teachers' practical arguments. The relevance of research for teaching practice can be understood in terms of how directly the research relates to the practical arguments in the minds of teachers (Fenstermacher, 1986, p. 44). Research can help change the truth value of teachers' premises. But research that is presented in a "Research says. . ." statement that does not account for teachers' practical arguments will probably be ignored or discounted. Further, mandated practices based on the research may be performed in a perfunctory manner, if at all (Richardson-Koehler, 1986b).

For purposes of this paper, beliefs are defined as propositions accepted as true (Green, 1971). Those beliefs that are related to a practice or action can be thought of as premises in a practical argument. However, the beliefs in a practical argument may or may not be held consciously at the time of an action. Thus, we are not using this concept to describe the ways teachers consciously make decisions while they are teaching, but to provide a means for teachers to examine their empirical premises and possibly change their practices based on empirically-derived information.

The means mentioned above involves the elicitation of practical arguments around an action taken by a teacher in the classroom. During such an elicitation, beliefs, in the form of premises, are articulated and connected to produce an elaborated rationale for an activity. Those beliefs may have affected the action in question or other actions, but were not, prior to the action, necessarily either consciously considered or considered in the particular sequence as indicated in the constructed practical argument.

The elicitation of practical arguments should not be confused with the determination of the conscious thought processes that precede a classroom decision. The following example indicates the difference:

> **Decision Analysis:** During a stimulated recall interview of a reading comprehension lesson in which the teacher was reading and the students following along in the text, the interviewer stops the videotape at a point where the teacher suddenly stops reading and asks Johnny to read. The interviewer asks the teacher why he turned the reading over to Johnny. The teacher responds: "Johnny was staring out of the window, which meant that he wasn't paying attention. So I asked him to read the next two lines where I stopped to bring him back into the book". This technique attempts to elicit a description of the thinking processes that preceded this classroom event, and allows the teacher to provide a reason for what he did.
>
> **Practical Argument:** The practical argument elicitation would probe much further into some of the premises around this action. For example: What is 'attention' in a reading comprehension lesson: listening? following along on the page? What was the outcome of asking Johnny to read? (Gaining his attention, but disrupting the lesson and embarrassing Johnny.) Why was gaining Johnny's attention worth the disruption? etc. The practical argument elicitation allows both the teacher and interviewer to find out what made the action a reasonable thing for the teacher to do.

Thus, the practical arguments in the minds of teachers, and the processes of eliciting practical arguments from teachers should not be confused with the content or determination of the thought processes used by a teacher prior to taking an action.

The process of eliciting practical arguments should also be distinguished from such psychological concepts as Schon's (1983) knowledge-in-action because it requires that two roles be played--a teacher and a student: one who elicits premises, one who provides them, and both to discuss them. (It is conceivable that these two roles could be played by the same individual.) While the premises of a practical argument are beliefs and thus are, in some sense, psychological, the process of eliciting these beliefs as rationale for an action is not. What can happen during this elicitation process is what Green (1971) describes as the activity of teaching: "teaching is an activity aimed at the formation of belief systems. . ." (p. 52). One desirable characteristic of a belief system, according to Green, is that it contains "a maximum proportion of evidential beliefs" (p. 52).

A staff development process based on practical argument elicitation can help a teacher bring together, organize and analyze a set of premises that provide rationale for an action, and examine them in relation to research.

Teacher Education and Staff Development Using Practical Arguments

An example of the use of practical arguments in changing beliefs and practices involved a teacher who began with notions about individualized instruction and learning centers. She was dissatisfied with the results of her teaching, but was not willing to employ practices that appeared to be at odds with her beliefs. Using an interview process, one of us elicited her practical arguments for her classroom practices. Focussing on several empirical premises, he introduced her to the Beginning Teacher Evaluation Study (Fisher and Berliner, 1985) and findings. The teacher changed several of her premises, and thereby her practices. (For a more thorough discussion, see Fenstermacher, 1986).

Following up on this work, Morine-Dershimer (1987) conducted a secondary analysis of stimulated recall data to determine a teacher's practical arguments and to indicate how some of the empirical premises were not research-based. The practical arguments for a given action were, however, gleaned from the complete transcript rather than from the teachers' specific explanation of a classroom action. A stimulated recall aimed at the elicitation of practical arguments would elicit the various premises at the point that the teacher views the specific action. Thus, the elicitation itself would begin the educational process for both teacher and interviewer.

This paper describes a teacher education model that is being developed through an Office of Educational Research and Improvement, U.S. Department of Education grant to introduce current research on reading instruction into teachers' thinking about their practices[=]. This school-based model will use belief interviews, videotaping, group practical argument elicitation, and current research discussions to change teaching practices.

The Reading Instruction Study

The objectives of this three-year project are to assess the degree to which teachers use research-based practices in their teaching of reading comprehension; to determine the barriers that prevent them from doing so; and to develop and test a school-based staff development model designed to change teachers' reading instruction practices.

These objectives are being accomplished through a series of activities. First, from reading research literature, practices are being identified, described, and categorized according to theoretical and research foundations. Second, through observation, the degree that upper-elementary teachers utilize research-based practices is being determined. Third, teacher beliefs and school-level factors that may inhibit or impede the use of research-based instructional practices are being examined. Fourth, a practical arguments staff development model, intended to examine teachers' beliefs and practices in the teaching of reading will be designed, implemented, and evaluated. Last, the effects of using research-based reading practices on student reading achievement will be evaluated. Thus, five major questions are being addressed:

- What are the research-based teaching of reading comprehension practices?
- To what degree are teachers using research-based teaching of reading comprehension practices?
- What are the barriers to the use of research-based practices?
- Can a school-based practical arguments staff development model affect teachers' use of research-based instruction of reading comprehension?

[=]The Co-Principal Investigators are Virginia Richardson-Koehler and Patricia Anders. Senior researchers are Judy Mitchell, Candace Bos, John Bradley and Gary Fenstermacher, all of the College of Education, University of Arizona.

- Does the use of research-based teaching of reading practices affect student reading achievement in a positive direction?

In this paper, we will discuss questions three and four.

Teachers' Beliefs

Teacher beliefs, along with school-level factors, are considered as the potential barriers to the introduction of research-based practices into a given classroom and school. Thus, all grades 4, 5 and 6 teachers in six schools were observed and interviewed. The interviews were designed to collect baseline information on teacher beliefs prior to the staff development program. The interview technique was an adaptation of the heuristic elicitation technique, developed by anthropologists to determine belief systems in groups of people (Black, 1969; Black and Metzger, 1969; Kay and Metzger, 1973; Metzger, 1973).

Within this framework, beliefs consist of a set of assertions held by informants and realized in the natural language as declarative sentences. This methodology uses both open-ended questions to construct the informants' propositions about the world, and closed-ended questions to establish the interviewers' understanding of the response. The technique differs from the practical argument elicitation in that it is not meant to be educational; thus the interviewer does not, for example, probe on apparent contradictions, or provide a different language to explain a phenomenon.

Teachers' beliefs about reading comprehension were assessed in two different ways. Teachers were asked about their notions of reading comprehension and how students learn to read in general, and then asked to identify and describe one of their problem readers, an excellent reader, and one just below average. The first set was designed to elicit their "declared" beliefs about reading comprehension: propositions given by a person in public behavior and speech, cited in argument, or used to justify actions to others (Goodenough, 1971). The second set was designed to elicit more private beliefs by asking them to think of specific examples. It was felt that their private beliefs would come closer to their beliefs in action. We also asked the teachers about their own backgrounds, and their classrooms, schools, and fellow teachers.

Using a constant comparative method (Glaser and Strauss, 1967), six randomly selected teachers' interviews are being analyzed separately, with categories emerging from the responses. Thus, a theory of reading is emerging for each of the six teachers. Common categories are being used to code each of the other

interviews. Each teacher's broad statements of beliefs about students will be examined in relation to their observed behaviors in the classroom.

The case of Sam will provide an example of one level of analysis of a belief interview, and will be used to indicate how the interview will be used in the staff development program.

> Sam had been teaching for ten years. He had taught most of the grades in elementary school, and had also been a bilingual resource teacher. This year, he is teaching a grade 6 classroom with 27 students. He remembers the children's literature class from his preservice education with its emphasis on involving, exciting and stimulating children to be involved with text. Sam equates learning to read with reading. That is, the more you read the better you read. For Sam, a good reader is one who is enthusiastic about reading, and reads continually. A poor reader avoids reading whenever possible. He feels that the difference between a good and poor reader is one of attitude and motivation, and the sheer amount of past reading experiences. Reading is something that you slowly get better at with experience.
>
> Sam's conception of reading and learning to read relates to his view of reading instruction. He describes himself as close to a whole language person, and has his own personal library of over 500 books for his students. He feels that his primary role is one of increasing his students' motivation to read, and giving them success experiences. He also works with basals. The whole group reads silently, and answers the question in writing. He corrects their answers that evening and they discuss them the next day.
>
> Sam sometimes works with his problem readers in a small group. They come to the back of the room if they are having trouble, and he first tells them the page on which to look for the answer; and, if they still can't find it, the paragraph; and finally the sentence. He wants to move them out of the small group as soon as possible, and sometimes will grade the students' answers higher than they deserve in order to convince them that they really can read. The problem student described by Sam was one who had a negative attitude and really had not "caught on to the concept of reading". He worked with her in exactly the same way that he worked with the other problem students.
>
> Sam, himself, was an avid reader and an avid book collector. He had a huge library at home, and felt that any book worth reading is worth owning. He haunted the used book stores for both children's books, and books for himself.

Sam and Research

Consider what would happen if Sam attended a staff development program that summarized research on the instruction of reading comprehension strategies? Since Sam holds very strong views on how students learn to read--by reading--the material presented in the staff development would probably not affect his practices. In fact, he had attended a number of such programs. He found them interesting, even tried a few things, but felt that many of the proposed practices didn't "work" for him. Sam teaches reading as he believes he learned to read. And yet a number of his students are still having difficulty and he is frustrated.

Perhaps these students require some instruction in reading comprehension strategies that have been identified in recent research on reading (see, for example, Beck & McKeown, 1986; Calfee & Drum, 1986; and Raphael, 1987). Acceptance and implementation of such an approach would require that Sam choose to alter his thinking about how at least some children should be taught to read. How can this be done without violating Sam's coherent, sophisticated and functional views of reading, students and himself? The practical arguments staff development program is designed to do just this.

Practical Arguments Staff Development Program

The Practical Argument staff development program will work at the individual and school level. The belief interviews will be used to identify areas of frustration and seemingly contradictory beliefs, and, in combination with our observational data, will guide our decisions as to when and what to videotape in each teacher's classroom. For Sam, we will videotape his work with slow readers, and his discussions with the whole group. The stimulated recall discussion will focus on what the students may be thinking and the processes they may be using as they attempt to read and answer questions, and on what strategies he himself uses to read difficult material. In this way, we will begin to introduce some of the research on the teaching of reading comprehension strategies.

School-level staff development activities are planned for several reasons. First, it would be a mistake to assume that the important and sole unit of change in instructional practices is the individual teacher working by him/herself (Bossert, 1985; Corcoran, 1985). One characteristic of effective schools that has been identified and discussed in the literature is collegiality (Little, 1987). Thus, one purpose of the school level activities will be to promote collegiality. Second, research on staff development processes has identified the school as the critical level in developing and implementing successful programs (Griffin, 1983; Howey & Vaughan, 1983; Ward, 1985).

Thus, the school-level activities will be developed in conjunction with the faculties and administrators at the individual schools. And third, it is our hope that the processes of eliciting practical arguments of classroom practices will become a part of the staff development procedures within the schools, and used in other curriculum areas such as mathematics.

The school level activities will vary from school to school. However, as now planned, some of the research that turns out to be of common interest to the teachers will be discussed in group meetings. In addition, it is hoped that at least several of the teachers will share their belief interviews with their fellow teachers to begin a more thorough discussion of beliefs and theories about teaching reading. Demonstrations of the practical argument elicitation technique will be provided as well. Teachers will be able to select areas with which to experiment in their classrooms, and these efforts will be videotaped and discussed in group sessions.

Three of the schools will participate in the staff development program next fall, and two others, the following fall. Following the program, teachers will again be observed, and another belief interview will be conducted. In addition, gains on scores of their students' reading achievement on both the Iowa standardized test and on the new Illinois Reading Measure developed at the Center for the Study of Reading at Illinois University will be assessed for the two year period.

Conclusion

The belief interviews and observations indicate that teachers are open to changing their practices, and in fact do so on a regular basis. Most of the teachers expressed an uncertainty as to whether they were doing the right things, and indicated that they would be happy to adopt new practices if they "worked" for them. Practices that "work" are those that match belief systems within an individual and make up that person's perceived identity. Unfortunately, these sets of beliefs often exclude certain practices that may, in fact, help teachers solve problems that are frustrating them.

The purpose of the practical arguments staff development program is not to shake up or change Sam's and his fellow teachers' overall conceptions of reading, students, and teaching reading. These conceptions are to be valued, since they are tied to who Sam is and how he conducts his life. The purpose is to provide the teachers with a way of examining their practices in relation to their classroom goals and premises about reading, students and teaching. In discussing the premises in relation to research on reading, it is possible that some of them will change, and thus a number of additional or alternative practices will begin to "work" for them.

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